WHAT IS CLAIMED IS:

1. A method of calculating presets of camera parameters corresponding to participants in a video conferencing system, said method comprising:

providing a camera having tilt, pan, and zoom parameters;

defining a space based upon a layout of said video conferencing system;

performing one of

moving said camera through all pertinent panning values, said pertinent panning values being defined by said space in which said video conferencing system is located, and

zooming said camera out so that all possible participants can be viewed by said camera and so that a location of each participant in said space can be determined;

detecting said participants within said space; and

calculating said presets corresponding to said participants, said presets defining a camera view, said presets being based upon at least one of an optimal position of said participants in said camera view, an alignment of the center of a head of said participants with a center of said camera view, and an alignment of a center of a participant with said center of said camera view.

2. The method as claimed in claim 1 further comprising tracking said participants by associating a label with each of said participants.

3. The method as claimed in claim 1 further comprising updating said presets by having said video conference system perform at least one of adjusting a preset when that preset is chosen by a user, deleting a preset when the participant corresponding to the preset leaves said space, and repeating said performing.

4. The method as claimed in claim 1 where in said calculating step, when more than one participant is within said camera view, the participants are combined into one combined image and the center of the combined image is used to determine said presets.

5. The method as claimed in claim 1 wherein said step of detecting comprises:

providing a digital image composed of a plurality of pixels;

producing a binary image from the digital image by detecting skin colored pixels;

removing pixels corresponding to edges in the luminance component of said binary image thereby producing binary image components;

mapping said binary image components into at least one graph; and

classifying said mapped binary image components as facial and non-facial types wherein the facial types serve as facial candidates.

6. The method as claimed in claim 5 further comprising the step of applying a heuristic, said heuristic including the following steps:

applying a morphological closing operation on each of said facial candidates to produce at least one closed facial candidate;

determining high variance pixels in said closed facial candidate;

determining the ratio between said high variance pixels and the total number of pixels in said closed face candidate; and

comparing said ratio to a threshold.

7. The method as claimed in claim 5 wherein said step of removing includes:

applying a mask to a plurality of pixels including an examined pixel;

determining the variance between said examined pixel and pixels disposed within said mask; and

comparing said variance to a variance threshold.

8. The method as claimed in claim 7 wherein:

said step of removing is repeated for decreasing variance thresholds until a size of said binary image components is below a component size threshold; and

after each step of removing said step of classifying said components is performed.

9. The method as claimed in claim 5 wherein said binary image components are connected.

10. The method as claimed in claim 5 wherein said step of classifying comprises forming a bounding box around a classified component of said components and performing at least one of:

forming a bounding box around a classified component of said components;

comparing an area of the bounding box to a bounding box threshold;

comparing an aspect ratio of the bounding box to an aspect ratio threshold;

determining an area ratio, said area ratio being the comparison between the area of said classified component and the area of said bounding box, and comparing said area ratio to an area ratio threshold;

determining an orientation of elongated objects within said bounding box; and

determining a distance between a center of said bounding box and a center of said classified component.

11. The method as in claim 5 wherein said step of mapping comprises the following steps:

representing each component as a vertex;

connecting vertices with an edge when close in space and similar in color, thereby forming said at least one graph.

12. The method as claimed in claim 11 wherein each edge has an associated weight and further comprising the steps of:

extracting the minimum spanning tree of each graph;

classifying the corresponding binary image components of each graph as either face or not face;

removing the edge in each graph with the greatest weight thereby forming two smaller graphs; and

repeating said step of classifying the corresponding binary image components for each of said smaller graphs until a bounding box around said smaller graphs is smaller than a graph threshold.

13. The method as claimed in claim 1 further comprising: providing at least a second camera for updating said presets by executing said performing.

14. A video conferencing system comprising:

at least one camera having pan, tilt, and zoom parameters;

said parameters having preset values assigned to corresponding participants of said video conferencing system;

each of said presets defining a camera view and being determined by:

one of panning and zooming said camera throughout a space defined by said video conferencing system,

detecting a participant, and

defining a preset based on a camera position which would place said participant in one of an optimal position, a position where a head of said participant is in alignment with a center of said camera's view, and a position where a center of said participant is aligned with said center of said camera's view.

15. The video conferencing system as claimed in claim 14 further comprising means for tracking said participants by associating a label with each of said participants.

16. The video conferencing system as claimed in claim 14 further comprising means for updating said presets by having said video conference system perform at least one of adjusting a preset when that preset is chosen by a user, deleting a preset when the participant corresponding to the preset leaves said space, panning said camera through said space, and zooming said camera through said space.

17. The video conferencing system as claimed in claim 14 wherein when more than one participant is with in said camera view, the participants are combined into one combined image and the center of the combined image is used to determine said presets.

18. The video conferencing system as claimed in claim 14 wherein said detecting comprises:

providing a digital image composed of a plurality of pixels;

producing a binary image from the digital image by detecting skin colored pixels;

removing pixels corresponding to edges in the luminance component of said binary image thereby producing binary image components;

mapping said binary image components into at least one graph; and

classifying said mapped binary image components as facial and non-facial types wherein the facial types serve as facial candidates.

19. The video conferencing system as claimed in claim 14 further comprising at least a second camera for updating said presets by performing at least one of panning said camera through said space, and zooming said camera through said space.

20. A video conferencing system comprising:

at least one camera having pan, tilt, and zoom parameters;

said parameters having preset values assigned to corresponding participants of said video conferencing system, said presets defining a camera view;

at least one of panning means for panning said camera throughout a space defined by said video conferencing system, and zooming means for zooming said camera out to thereby allow said camera to view the space defined by said video conferencing system;

detecting means for detecting participants in said space; and

determination means for determining presets of said camera based on a camera position which would place one of said participants in one of an optimal position, a position where a head of said participant is in alignment with a center of said camera's view, and a position where a center of said participant is aligned with said center of said camera's view.

21. The video conferencing system as claimed in claim 20 further comprising means for tracking said participants by associating a label with each of said participants.

22. The video conferencing system as claimed in claim 20 further comprising means for updating said presets by having said video conference system perform at least one of adjusting a preset when that preset is chosen by a user, deleting a preset when the participant corresponding to the preset leaves said space, panning said camera throughout said space, and zooming said camera throughout said space.

23. The video conferencing system as claimed in claim 20 wherein when more than one participant is within said camera view, the participants are combined into one combined image and the center of the combined image is used to determine said presets.

24. The video conferencing system as claimed in claim 20 wherein said detecting comprises:

providing a digital image composed of a plurality of pixels;

producing a binary image from the digital image by detecting skin colored pixels;

removing pixels corresponding to edges in the luminance component of said binary image thereby producing binary image components;

mapping said binary image components into at least one graph; and

classifying said mapped binary image components as facial and non-facial types wherein the facial types serve as facial candidates.

25. The video conferencing system as claimed in claim 20 further comprising at least a second camera for updating said presets by performing at least one of panning said camera throughout said space and zooming said camera throughout said space.